

I CLAIM:

1. A linear positioning system for guiding a rip fence structure on a table saw comprising

a rail assembly,

5 a carriage configured to move back and forth along the rail assembly, and

a partially folded coupler sheet rigidly connecting the carriage to the fence structure.

10 2. The system of claim 1 wherein the carriage moves in a processing direction parallel to the direction of fence structure movement, the coupler having plural planer portions oriented parallel to the processing direction.

15 3. The system of claim 1, wherein the coupler has a top planer portion secured to a top side of the fence structure.

4. The system of claim 1, wherein the coupler has an opening through which a  
20 handle extends for manipulating an interlock that prevents simultaneous operation of the saw when the fence structure is moving.

5. The system of claim 4 further comprising  
an actuator connectable to the handle, and  
a plate member, the actuator being mounted on the plate member, the plate member being rigidly secured to the carriage.

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6. The system of claim 5 wherein the coupler has plural planer portions, and the plate member has a main planer portion oriented perpendicular to the planer portions of the coupler.

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7. The system of claim 1, wherein the rail assembly includes a substantially cylindrical housing containing a threaded rod, the carriage having complementing threads so the carriage moves along the rail assembly as the threaded rod rotates.

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8. The system of claim 1, wherein the carriage has a T-shaped groove for receiving one or more bolt members fastening the coupler to the carriage.

9. The system of claim 5, wherein the actuator includes a hydraulic or pneumatic cylinder for driving the handle between locked and unlocked positions.

5 10. A linear positioning system for guiding a rip fence structure on a table saw comprising

a rail assembly,

a carriage configured to move back and forth along the rail assembly, and

a coupler rigidly connecting the carriage to the fence structure, the coupler being  
10 formed of a metal sheet with one or more partial folds around an axis parallel to the direction of fence structure movement.

11. The system of claim 10, wherein the coupler is secured to the fence  
15 structure at least at two points.

12. The system of claim 10, wherein the coupler is secured to the carriage at  
least at two points.

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13. The system of claim 11, wherein the two points define a line that is not perpendicular to the direction of fence structure movement.

5 14. The system of claim 13, wherein the two points define a line generally parallel to the direction of fence structure movement.

15. The system of claim 12, wherein the two points define a line that is not  
10 perpendicular to the direction of fence structure movement.

16. The system of claim 15, wherein the two points define a line that is generally parallel to the direction of fence structure movement.  
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17. The system of claim 10, wherein the coupler is secured to the fence structure at a first set of at least two points, and the coupler is secured to the carriage at a second set of at least two points, each of the first and second sets of points being  
20 substantially parallel to the direction of fence structure movement.

18. A linear positioning system for guiding a rip fence structure on a table saw comprising

a rail assembly,

a carriage configured to move back and forth along the rail assembly, and

5 a coupler rigidly connecting the carriage to the fence structure, the coupler being formed of a metal sheet with one or more partial folds around an axis parallel to the direction of fence structure movement, the coupler being secured to the fence structure at a first set of at least two points, and the coupler being secured to the carriage at a second set of at least two points, each of the first and second sets of points being substantially  
10 parallel to the direction of fence structure movement.